

Application No. 10/033,734  
Amendment "B" dated May 25, 2004  
Reply to Office Action mailed March 12, 2004

### AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

#### Listing of Claims:

1. (Currently Amended) In dental floss, the improvement comprising:  
coating or impregnating said dental floss with a colored material to yield a colored dental floss that is colored prior to use and that changes color though removal of said colored material from said colored dental floss when said colored dental floss is passed between the teeth of a user in order to indicate which portion of said dental floss has been used.
2. (Currently Amended) In dental floss, the improvement comprising:  
coating or impregnating said dental floss with a color-changing material that changes color in response to changes in pH throughout a pH range of 5.0 to 9.0 when said dental floss is exposed to saliva and which does not remain on a user's teeth.
3. (Currently Amended) In dental floss, the improvement comprising:  
coating or impregnating said dental floss with an indicator dye comprising at least one of thymol blue or bromthymolphthalein and which does not remain on a user's teeth.
4. (Previously Presented) In dental floss, the improvement comprising:  
coating or impregnating said dental floss with a color-changing material that changes color when said dental floss contacts particular enzymes in a mouth as a result of a chemical reaction between said color-changing material and the particular enzymes.
5. (Currently Amended) In dental floss, the improvement comprising:  
coating or impregnating said dental floss with a color-changing material that ~~only~~ changes color when said dental floss contacts particular enzymes in a mouth within an in vivo temperature range.

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6. (Currently Amended) In dental floss, the improvement comprising:  
coating or impregnating said dental floss with a material disease indicating agent  
that indicates and specifically identifies the presence of one or more of a virus, disease,  
infection, bacteria, or plaque,

said disease indicating agent characterized by at least one of the following:

- (i) being sensitive to enzyme presence;
- (ii) being a fluoroscopic material;
- (iii) being an oral cancer detecting agent; or
- (iv) being a diabetes detecting agent.

7. (Currently Amended) In dental floss comprising nylon or rayon, the improvement  
comprising:

directly coating or impregnating said dental floss comprising nylon or rayon with  
a medicament or anti-microbial material mixed within a composition comprising water,  
ethanol, and one or more water-soluble polymers;

drying said dental floss; and

winding said coated or impregnated dental floss onto a spool for storage and later  
use.

8. (Currently Amended) A dental hygiene material, comprising:  
dental floss; and

a coloring material coating said dental floss or impregnated in said dental floss so  
that said dental floss is colored prior to use and so that said dental floss changes color  
when passed between two adjacent teeth so as to remove at least a portion of the coloring  
material from the portion of the dental floss passed between adjacent teeth and indicate  
which portion of said dental floss has been used.

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9. (Currently Amended) A dental hygiene material, comprising:  
dental floss; and  
color-changing material coating said dental floss or impregnated in said dental floss that changes color in response to changes in pH throughout a pH range of 5.0 to 9.0 when said dental floss is exposed to saliva and which does not remain on a user's teeth.
10. (Currently Amended) A dental hygiene material, comprising:  
dental floss; and  
an indicator dye comprising at least one of thymol blue or bromthymolphthalein and which does not remain on a user's teeth.
11. (Previously Presented) A dental hygiene material, comprising:  
dental floss; and  
a color-changing material coating said dental floss or impregnated in said dental floss that changes color when said dental floss contacts particular enzymes in a mouth as a result of a chemical reaction between said color-changing material and the particular enzymes.
12. (Currently Amended) A dental hygiene material, comprising:  
dental floss; and  
a color-changing material coating said dental floss or impregnated in said dental floss that only changes color when said dental floss contacts particular enzymes in a mouth within an in vivo temperature range.

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13. (Currently Amended) A dental hygiene material, comprising:  
dental floss; and  
a material disease indicating agent coating said dental floss or impregnated in said dental floss that is capable of indicating and specifically identifying the presence of one or more of a virus, disease, infection, bacteria, or plaque,

said disease indicating agent characterized by at least one of the following:

- (i) being sensitive to enzyme presence;
- (ii) being a fluoroscopic material;
- (iii) being an oral cancer detecting agent; or
- (iv) being a diabetes detecting agent.

14. (Currently Amended) A dental hygiene material, comprising:  
dental floss comprising nylon or rayon wound onto a spool for storage and later use; and

a medicament or anti-microbial material directly coating said dental floss or impregnated in said dental floss and that was applied to said dental floss mixed in a composition comprising water, ethanol and one or more water-soluble polymers.

15. (Currently Amended) A method for identifying whether dental floss has been passed between the teeth of a user, comprising:

providing a colored dental floss coated or impregnated with a colored material so that said dental floss is colored prior to use; and

passing a portion of said colored dental floss between adjacent teeth of the user in order to remove at least some of said colored material from the portion of said dental floss that is passed between the adjacent teeth and indicate which portion of said dental floss has been used.

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16. (Currently Amended) A method for identifying whether dental floss has been passed between the teeth of a user, comprising:

providing dental floss coated or impregnated with a color-changing material that changes color in response to changes in pH throughout a pH range of 5.0 to 9.0 when said dental floss is exposed to saliva; and

passing a portion of said dental floss between adjacent teeth of the user in order for said portion of said dental floss to change color without said color-changing material remaining on the user's teeth.

17. (Currently Amended) A method for identifying whether dental floss has been passed between the teeth of a user, comprising:

providing dental floss coated or impregnated with an indicator dye comprising at least one of thymol blue or bromthymolphthalein; and

passing a portion of said dental floss between adjacent teeth of the user in order for said portion of said dental floss to change color without said indicator dye remaining on the user's teeth.

18. (Previously Presented) A method for identifying whether dental floss has been passed between the teeth of a user, comprising:

providing dental floss coated or impregnated with a color-changing material that changes color when said dental floss contacts particular enzymes in a mouth as a result of a chemical reaction between said color-changing material and the particular enzymes; and

passing a portion of said dental floss between adjacent teeth of the user.

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19. (Currently Amended) A method for identifying whether dental floss has been passed between the teeth of a user, comprising:

providing dental floss coated or impregnated with a color-changing material that only changes color when said dental floss contacts particular enzymes in a mouth within an in vivo temperature range; and

passing a portion of said dental floss between adjacent teeth of the user.

20. (Currently Amended) A method for identifying the presence of virus, disease, infection, bacterial or plaque between the teeth of a user, comprising:

providing dental floss coated or impregnated with a material disease indicating agent that indicates and specifically identifies the presence of one or more of a virus, disease, infection, bacteria, or plaque,

said disease indicating agent characterized by at least one of the following:

- (i) being sensitive to enzyme presence;
- (ii) being a fluoroscopic material;
- (iii) being an oral cancer detecting agent; or
- (iv) being a diabetes detecting agent; and

passing a portion of said dental floss between adjacent teeth of the user.

21. (Currently Amended) A method for administering a medicament or anti-microbial agent between the teeth of a user, comprising:

providing dental floss that comprises nylon or rayon, that is directly coated or impregnated with a medicament or anti-microbial material that was applied to said dental floss mixed in a composition comprising water, ethanol and one or more water-soluble polymers, and that has been wound onto a spool after being coated or impregnated with said medicament or anti-microbial material for storage and later use; and

passing a portion of said dental floss between adjacent teeth of the user.

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22. (Currently Amended) Dental floss coated or impregnated with a material comprising consisting essentially of:

0 to 5%  $K_2CO_3$ , 0 to 5%,  $Na_2CO_3$ , 0-5% glycerol, 30 to 60%  $H_2O$ , 30 to 60% ethanol, 0 to 2% flavorings, 0 to 0.5% CHG/CHA, 0 to 0.5% NaF, 0.1 to 3.0% indicator dyes, 10 to 40% water soluble polymers, and 0 to 5% Triethanol amine;

wherein the indicator dyes are selected from the group of indicator dyes consisting of thymol blue, bromthymolphthalein and specific aerobic and anaerobic bacteria, virus and discase condition indicators, and

wherein the dental floss is subsequently dried after being coated or impregnated with the material

~~the soluble polymers are selected from the group of soluble polymers consisting of cellulose and polyethylene oxide pyrrolidone.~~

23. (Currently Amended) A dental floss assembly, comprising:

a housing;

at least one spool of dental floss disposed within said housing; and

a colored or color-changing material coating or impregnated within said dental floss that causes said dental floss to change color when said dental floss is passed between the teeth of a user in order to indicate which portion of said dental floss has been used, but which does not remain on the teeth, as a result of at least one of the following:

(i) through removal of said colored or color-changing material when said dental floss is used to floss teeth,

(ii) in response to changes in pH throughout a pH range of 5.0 to 9.0,

(iii) because said colored or color-changing material is an indicator dye comprising at least one of thymol blue or bromthymolphthalein, or

(iv) as a result of a chemical reaction between said colored or color-changing material and particular enzymes found in the mouth of a user.

24. (Original) A dental floss assembly as recited in claim 23:

wherein said dental floss changes color when subjected to friction.

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25. (Original) A dental floss assembly as recited in claim 23:  
wherein said dental floss changes color when said dental floss is subjected to friction in the presence of saliva.
26. (Original) A dental floss assembly as recited in claim 24:  
wherein said dental floss changes color when said dental floss is subjected to friction in the presence of saliva within an in vivo temperature range.
27. (Original) A dental floss assembly as recited in claim 23:  
wherein said dental floss changes color when said dental floss contacts particular enzymes.
28. (Original) A dental floss assembly as recited in claim 27:  
wherein said dental floss changes color when said dental floss contacts particular enzymes within an in vivo temperature range.
29. (Currently Amended) A dental floss assembly, comprising:  
a housing;  
at least one spool of dental floss disposed within said housing for storage and later use, said dental floss comprising nylon or rayon; and  
a medicament directly coating or impregnating said dental floss and that was applied to said dental floss mixed in a composition comprising water, ethanol and one or more water-soluble polymers.
30. (Original) A dental floss assembly as recited in claim 29:  
wherein said medicament comprises an anti-microbial agent.
31. (Original) A dental floss assembly as recited in claim 29:  
wherein said medicament comprises sodium fluoride (NaF).



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32. (Original) A dental floss assembly as recited in claim 29:  
wherein said medicament comprises chlorhexidine digluconate (CHG).
33. (Original) A dental floss assembly as recited in claim 29:  
wherein said medicament comprises chlorhexidine acetate (CHA).
34. (Original) A dental floss assembly as recited in claim 29:  
wherein said dental floss is scented.
35. (Original) A dental floss assembly as recited in claim 29:  
wherein said dental floss is flavored.
36. (Currently Amended) A dental floss assembly, comprising:  
a housing;  
at least one spool of dental floss disposed within said housing; and  
a disease indicating agent coating or impregnating said dental floss that indicates  
and specifically identifies the presence of a particular oral disease if present in a user's  
mouth,  
said disease indicating agent characterized by at least one of the following:  
  - (i) being sensitive to enzymic presence;
  - (ii) being a fluoroscopic material;
  - (iii) being an oral cancer detecting agent; or
  - (iv) being a diabetes detecting agent.
37. (Original) A dental floss assembly as recited in claim 36:  
wherein said disease indicating agent is an oral cancer detecting agent.
38. (Original) A dental floss assembly as recited in claim 36:  
wherein said disease indicating agent comprises a plaque indicator.

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39. (Original) A dental floss assembly as recited in claim 38:  
wherein said plaque indicator comprises fluorescein sodium.
40. (Previously Presented) A dental floss assembly as recited in claim 38:  
wherein said plaque indicator comprises an enzyme detector.
41. (Currently Amended) A dental floss assembly as recited in claim 40 36:  
wherein said ~~enzyme detector is used to detect~~ disease indicating agent detects  
enzymes that are indicative of diabetes.
42. (Original) A dental floss assembly as recited in claim 36:  
wherein said dental floss is scented.
43. (Original) A dental floss assembly as recited in claim 36:  
wherein said dental floss is flavored.